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ABSTRACT

It has been repeatedly demonstrated that persons who experience a high degree of test anxiety also experience decrements in performance in evaluative situations. A study was conducted to develop a test anxiety questionnaire for student nurses in order to identify test anxiety. A 40-item, self-report questionaire was developed by two panels of experts composed of nursing faculty at Los Angeles Valley College (LAVC) and was deemed appropriate by the panel for the identification of test anxiety. The final draft of the questionnaire was administered twice to 50 second-year nursing students at LAVC in a test/retest procedure. The results indicated that there were 15 students (30%) in the "Low Anxiety" range, 25 students (50%) in the "Moderately Low Anxiety" range, 10 students (20%) in the "Moderately High Anxiety" range, and no students in the "High Anxiety" range. The expert panels agreed that the questionnaire did possess face validity, and that the statistical analysis of the data indicated a strong positive correlation and reliability of the questionnaire. It was recommended that: (1) the study should be shared with the entire nursing faculty, the dean of vocational education, and the district office; (2) the questionnaire should be retested by all the nursing students; (3) the nursing students should critique the questionnaire for clarity; and (4) information on the identification and treatment modalities on test anxiety should be given to the entire nursing faculty. Appendices include questionnaire scoring instructions, panel ratings, the questionnaire, and student consent form. (EJV)

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DEVELOPMENT OF A QUESTIONNAIRE IN ORDER TO IDENTIFY TEST ANXIETY IN NURSING STUDENTS

LEARNING THEORY AND APPLICATIONS SEMINAR

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A Practicum presented to Nova University in partial fulfillment of the requirements for the degree of Doctor of Education

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ABRSTACT

It has been repeatedly demonstrated that persons who are high in test anxiety experience decrements in performance in evaluative situations. College nursing students who are relaxed and confident while taking test have a distinct advantage over those who become extremely anx ous when facing an important test.

The development of a test anxiety questionnaire designed for Associate Degree nursing students was deemed appropriate to assess the subjective emotional and physiological reactions expereinced by these students in a test situation. Since there are many signs and symptoms of anxiety, a questionnaire utilizing medical terminology in order to assess for those signs and symptoms was deemed important and valid owing to the level of medical terminology possessed by the student nurses.

The purpose of this practicum was to develop a test anxiety questionnaire for student nurses in order to identify test anxiety. A 40-item self-report questionnaire was developed by two expert panels consisting of nursing faculty members at Los Angeles Valley college and was deemed appropriate by the panel in the identification of test anxiety. The final draft of the questionnaire was administered twice to 50 second year nursing students at Los Angeles Valley College in a test-retest procedure.

The results centered around two areas: first, the expert panels agreed that the questionnaire did possess face validity, and second, the statistical analysis of the data indicated a strong positive correlation and reliability of the questionnaire.

The panel perceived the questionnaire as being a needed instrument in the program in assessing for and identifying test anxiety in the nursing students. The student nurses who participated in the study also commented favorably on the importance of the questionnaire.

The recommendations centered around the following suggestions: 1) the study should be shared with the entire nursing faculty, Dean of vocational Education, and the District Office; 2) the questionnaire should be retested by all the nursing students, 3) the nursing students should critique the questionnaire for clarity; 4) information on the identification and treatment modalities on test anxiety should be given to the entire nursing faculty and exchange information with the other nursing programs in the district.

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INTRODUCTION

The art of test-taking is knowing how to take a test and is almost as important as having the basic knowledge and information necessary to answer the questions correctly. Test-taking ability can be divided into three categories: mastery of basic knowledge and information; awareness of test-taking techniques and strategies; and freedom from anxiety which, if present at a high level, will interfere with the utilization of both of the other categories (Langerquist, 1982).

There are unique and inherent problems for a student nurse when taking a paper and pencil nursing test during their course of studies. Typically a student who is taking a history test, for example, performs rote memory tasks and returns that information on a test. By contrast, a nursing test may consist of some root memory tasks, but the majority of the questions require comprehension, application and analysis of previously learned material. Straight recall of facts is not sufficient for the student nurse to pass a nursing test.

There is also another factor that places added anxiety on the nursing student, the inherent value placed on the test by the nursing student. The ability of the nursing student to successfully continue their nursing studies is partially based on their test scores. Since the

nursing courses are sequential in nature at Los Angeles Valley College, and are offered on a seat abailability bases, if a student nurse fails a semester, it may be two or three additional semesters before they can be readmitted to the program in order to continue their studies. Nursing students who are relaxed and confident while taking tests have a distinct advantage over those who become extremely anxious when facing an important nursing test (National Nursing Review, 1983). Nursing students tend to place a great value on their test scores, as it is indicative to them of their ability to perform safe and humanistic nursing care.

Statement of the Problem

There are many nursing review books and review classes available to the graduate nurse who is awaiting the opportunity to take the NCLEX-RN Examination (National Council Licensure Examination for Registered Nurses). In these books and classes a portion is devoted to the subject of Test-Taking Strategies in order to reduce test anxiety. However, for the student nurses at Los Angeles Valley College, who are currently pursuing their course of nursing studies, the curriculum does not include information on this this subject matter, nor are they directed to sources for this material. In addition, they cannot attend the review classes until they have graduated from a registered nursing program. The current test anxiety inventories are suggested

for high school and college students. However, these were deemed inappropriate for the nursing students at Los Angeles Valley College.

The development of a test anxiety questionnaire designed for Associate Degree nursing students was deemed apprioruiate to assess the subjective emotional reactions experienced by these students in a test situation. Since there are many signs and symptoms of anxiety, a questionnaire utilizing medical terminology in order to assess for those signs and symptoms was deemed important and valid owing to the level of medical terminology possessed by the student nurses.

The purpose of the development of this questionnaire was to identify those nursing students who indeed have a high level of test anxiety. In doing so, these students can be directed early in their course of nursing studies to learn test-taking strategies that include the reduction of test anxiety, and thus having done so,perhaps there will be an improvement in their test scores.

The statements and the format of the test anxiety questionnaire was developed by an expert panel in order to establish content validity, and reliability coefficients were established by a test-retest procedure.

BACKGROUND AND SIGNIFICANCE

The Learning Theory and Applications Seminar material noted new techniques for the management of learning. One of these important techniques from the Humanistic Position was that

> cognitive learning is indeed hampered by undue stress and anxiety. If these can be reduced, the learning process will be enhanced (Losak, 1984:19).

Anxiety is recognized as in important psychological variable affecting the learning process (Phillips, Martin, and Meyers, 1977; Tobias, 1979). Researchers consistently have noted a positive relationship between how a student performs and the degree of anxiety exhibited as measured by standard scales (Geen, 1980; Sarason, 1958; Sepie and Keeling, 1978).

Anxiety is such an intrinsic part of the human condition that it has been recognized as one of the most pervasive psychological phenomena of our times. Since the construction of assessment instruments, such as the Manifest Anxiety Scale (Taylor, 1953), there have been thousands of studies investigating the debilitating effects of anxiety, many of which examined school settings. Given the highly evaluative nature of most schools, with advancement in grade level usually dependent upon some sort of test performance, test anxiety has been the focus of many of these studies and has come to be considered one of the major psychological

variables in education (Schwarzer, van der Ploeg and Spielberger, 1982; Tobias, 1979).

Test anxiety theory was introduced more than three decades age by George Mandler and Seymour Sarason (1952, 1953) to account for the effects of anxiety on performance in test situations. In their research, test anxiety was inferred from responses to a questionnaire that inquired about past experiences in testing situations (Sarason and Mandler, 1952). Scores on this Test Anxiety Questionnaire (TAQ) have been used in numerous investigations to assess individual differences in test anxiety.

Mandler and Sarason (1952) found that anxious college students performed more poorly on intelligence tests than students who were low in test anxiety, and that decrements in the performance of highly anxious students were most pronounced when tests were administered under stressful ego-involving conditions. In order to explain these performance decrements, Mandler and Sarason assumed that two kinds of learned drives were evoked in testing situations. One set of drives, called "learned task drives," is elicited by the demand characteristic of the task. These drives stimulate task-relevant responses that lead to the reduction of the drive through task completion.

The second type of drive evoked in testing situation was labeled "learned anxiety drive." Mandler and Sarason assumed that two types of responses were elicited by

learned anxiety drives: 1) task-relevant responses, and 2) task-irrelevant responses. Since anxiety-mediated, task-relevant responses facilitate task completion, they are functionally equivalent to learned task drives. Both of these drives contribute to the facilitation of effective performance. The task-irrelevant responses evoked by learned anxiety drives interfere with performance in testing situations. These anxiety-evoked responses are characterized (Mandler and Sarason, 1952) by "feelings of inadequacy, helplessness, heightened somatic ractions, anticipations of punishment or loss of status and esteem, and implicit attempts at leaving the test situation. Since these responses are self-centered rather than task oriented, they interfere with effective performance.

Mandler and Sarason's Test Anxiety Theory assumes that learned anxiety drives and anxiety-mediated task drives are incompatible because they lead to different intervening responses and different behaviors. While learned task drives evoke self-centered responses that interfere with performance. These incompatible drives were labeled facilitating and debilitating anxiety by Alpert and Haber (1960) in their bidimensional theory of test anxiety. Facilitating anxiety experienced in evaluative situations serves as a task relevant drive to evoke responses that increase the probability of successful task completion. Persons who respond to test situations with debilitating anxiety are charachterized by the following coping mechanisms:

nontask-related coping mechanisms that serve to distract them from the demand characteristics of the task and, thus, interfere with successful performance. Debilitating anxiety would seem to be responsible for the performance decrements experienced by high test-anxious subjects.

On the basis of factor analytic studies of the TAQ, Liebert and Morris (1967; Spiegler, Morris, and Liebert, 1968) have propossed that test anxiety consists of two major components: worry and emotionality. The worry component is described as "primary cognitive conern about the consequences of failure" (Liebert and Morris, 1967:975). The emotionality component refers to the autonomic reactions that are evoked by evaluative stress. Morris and Liebert (1969) suggest that worry interferes with performance and leads to decrements on intellectual and cognitive tasks. In contrast, the emotionality factor is typically unrelated to task performance except for subjects who are low on the worry factor.

Wine (1971) assumes that test anxious persons react to evaluative threat with self-oriented, interfering responses. But Wine places greater emphasis on the attention between "self-relevant" and "task-relevant" responses while low test-anxious persons focus their attention more fully on the task.

Irwin Sarason (1958, 1960, 1961, 1965) has made a major contribution to the development of Test Anxiety Theory. Sarason's research has been concerned with specifying

situational factors and personality characteristics that contribute to the differential performance of high and low test-anxious persons in evaluative situations. When achievement aspects of performance are emphasized, high test-anxious persons perform more poorly than do individuals who are low in test anxiety (I. Sarason, 1960, 1961). When the instruction for a task are designed to allay anxiety, low test-anxious subjects perform more poorly (I. Sarason, 1958). In free-responding, conversational situations, high test-anxious individuals make significantly more negative self-references than do low test-anxious persons (I. Sarason and Ganzer, 1962, 1963; I. Sarason and Koenig, 1965), and are more responsive to reinforcement in both free verbalization and verbal conditioning experiments (I. Sarason, 1958; I. Sarason and Harmatz, 1965).

From the foregoing discussion, it is apparent that research findings from a number of diverse points of view have contributed to test anxiety theory. Most investigators seem to agree that individual differences in the tendency to emit self-centered, interfering responses as reactions to evaluative threat contribute to the performance decrements of persons who are high in test anxiety.

The Los Angeles Valley College Program for Registered Nurses has seen many students who are performing well in the clinical area, but seem to have a difficult time when taking their paper and pencil tests. Since it is

important to the survival of the program to have a low atttition rate and accountability for vocational education programs becomes even more important as we are faced with decreased funds and number of faculty, a study of this type will assist Los Angeles Valley College, Department of Nursing, in identifing those nursing students with high levels of test anxiety early in their course of studies and enable the faculty to direct them to appropriate resources in order to assist them to perform at their best and thus perhaps lowering our attrition rate.

LITERATURE REVIEW

The foundation for the study in the development of a questionnaire in order to identify test anxiety in nursing students was based on a review of related and appropriate literature pertaining to the development of a questionnaire in general, and more specifically the development of a questionnaire in the measurement of test anxiety.

The first instrument for measuring test anxiety was developed by Sarason and Mandler (1952). These investigators constructed a questionnaire to assess subjective emotional reactions experienced by students in test situations. The following questions were used in the original test anxiety questionnaire (Sarason and Mandler, 1952:18):

> 19. While taking a group intelligence test, to what extent do you perspire?
>
> 24. In comparison to other students, how often do you (would you) think of ways of avoiding an individual intelligence test?
>
> 26. When you are taking a course esamination, to what extent do you feel that your emotional reactions interfere with or lower your performance?

Subjects responded to an initial set of 42 test anxiety questions by marking a 10-centimeter graphic scale with a specified midpoint and explicit end points, i.e., "perspire not at all"; "perspire a lot." The subject's test anxiety score for each question was expressed in millimeters.

An item analysis procedure was applied to the original set of items and 37 questions were found to discriminate reliably between extreme groups defined by the scores for the total scale. The Test Anxiety Questionnaire (TAQ) consists of these 37 questions administered in the graphic rating-scale format. The split-half reliability of the TAQ for a sample of 100 Yale undergraduates was .99 and the test-retest erliability for this scale over a six week interval was .82. Scores on teh TAQ have been found to correlate negatively with a number of intellectual measures (I. Sarason, 1960).

In 1958, I. Sarason reported a 21-item test anxiety (TA) scale in which question were taken from Sarason and Mandler's (1952) TAQ graphic rating scale and rewritten in true-false item format. For example, the TAQ item, "While taking a group intelligence test, to what extent do you perspire?" was transformed into, "While taking an important examination, I perspire a great deal." In a sample of neurotic and psychotic patients, the TA scale correlated .46 with a general anxiety sclae constructed by I. Sarason. It also correlated .37 with a measure of hostility, .24 with need achievement, and -.61 with a defensiveness scale that consisted of items drawn from the K scale of the MMPI. I. Sarason and Ganzer (1962) published a 16-item test anxiety scale (TAS) in an investigation of the effects of instructions on free verbalization. In this study, high

test-anxious subjects showed an increase in percentage of negative self-references in a threat conditon as compared with a nonthreat condition, whereas low test-anxious subjects did not respond differentially with regard to negative self-references in these two conditions. The relationship between the 16-item TAS used in this study and the 21-item TA scale previously reported by Sarason (1958) was not clear, but the first question in the 16-item scale was the same as the example given for the 21-itme scale. Presumably, the 16-item TAS contained the best items from the 21-item scale.

In 1968, I. Sarason, Pederson, and Nyman employed a 37-itme test anxiety scale which they describe as "an expansion of the previously reported 16-item test anxiety scale [1968:499]." This 37-item TAS correlated .93 with the shorter version used in earlier studies. The list of items for the 37-itme true-false TAS was reported by I. Sarason in 1972. Presumably, the research reported by I. Sarason and his colleagues subsequent to the Sarason et. al. (1968) article has employed this 37-itme scale, but the TAS still lacks norms and a systematic presentation of its correlates. Since the TAQ and the TAS, including its earlier versions, have been widely used in research on test anxiety, the lack of information regarding the psychometric properties of these scales remains a serious limitation in test anxiety research.

Alpert and Haber (1960) developed the Anxiety Achievement Test (AAT) to measure the concepts of facilitating and debilitating anxiety. The Facilitating Anxiety scale (AAT+) is comprised of 9 items; the Debilitating Anxiety scale (AAT-) consists of 10 items, and the two scales are negatively correlated (r = -.37). The test-retest reliability for the AAT+ and AAT- were .83 and .87, respectively over a ten week interval, and .75 and .76 respectively, over an eight month period. The AAT- is correlated .64 with the TAQ, whereas the AAT+ correlated -.40 with the TAQ. The AAT- and AAT+ also correlate .38 and -.33, respectively, with the Taylor (1953) Manifest Anxiety Scale. While the AAT has been used much less extensively in research on test anxiety than the TAQ and TAS, the psychometric information provided by the authors is more detailed and all applications of the scale that are reported in the literature are apparently based on the origianl 19-itme version.

Allen (1971) used the A-state and A-trait scales of the State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsuch, and Lushene, 1970) as outcome measures in a study of the effects of systematic desensitization on test anxiety. Allen reported significant decreases in both state and trait anxiety as a function of study counseling, attention, focusing, and a condition that combined study counseling and systematic desensitization. The STAI A-state scale consists

of 20 items that instruct the subject to indicate how he feels "right now, at this very moment" by rating himself on a four-point scale: "Not at all," "Somewhat," "Moderately so," "Very much so." The STAI A-trait scale also consists of 20 items, but the subject is instructed to repond to these items according to how he generally feels by rating himself on the following four-point scale: "Almost never," "Sometimes," "Often," "Almost always." The STAI A-state scale has been shown to increase in response to various forms of stress and to decline in response to relaxation training. The STAI A-trait scale appears to reflect relatively stable individual differences in anxiety proneness, i.e., differences in the preposition to respond to ego threats with differential elevations in A-state.

Conceptualizing test anxiety as consisting of two components, worry and emotionality, Liebert and Morris (1967) developed brief 5-item scales to measure each component. The items for the Worry (W) and Emotionality (E) scales were selected from the TAQ on the basis of their content validity and then modified so that subjects' responses would reflect immediate feelings. The W and E scales were given to subjects immediately prior to an important examination, with instructions to "indicate how you feel right now, that is in relation to this examination" (Liebert and Morris, 1967:976). In this study, and in several subsequent investigations in which similar procedures were used

(Doctor and Altman, 1969; Morris and Liebert, 1969, 1970; Spiegler, Morris and Liebert, 1968), scores on the W scale were found to be negatively and consistently related to performance on a variety of tasks. In contrast, scores on the E scale were unrelated to task performance in two studies, and negatively correlated with performance in a third study, but only among subjects scoring low on W (Doctor and Altman, 1969).

When the W and E scales were given 5 days before, immediately before, and immediately after a major examination, W scores remained relatively constant across these administrations while E scores increased immediately prior to the exam and decreased following completion of the exam (Spiegler, Morris and Liebert, 1968). The pattern of scores for the W and E scales was similar to findings for the STAI A-Trait and A-state scales in investigations of the effects of situational stress on theses measures, suggesting that E scores reflect an emotional state and that W scores measure individual differences in worry proneness. Both E and STAI A-state scores increase in response to situational stress and decrease as a function of relazation, while W and STAI A-trait scores are relatively stable and impervious to the stresses assoicated with the testing conditions.

The Suinn (1969) Test Anxiety Behavior Scale (STABS) was specifically developed to measure test anxiety in

with behavior therapy research. This scale consists of 50 itmes that describe test-related behavioral situations that are assumed to arouse different levels of anxiety during examinations. Subjects are required to rate the amount of anxiety they experience on each situation on a 5-point scale from "Not at all" to "Very much." The test-retest reliability of the STABS ranges from .74 to .78 over a four to six week period. Scores on the STABS correlate around .60 with I. Sarasons's (1957) TAS and correlates between -.24 and -.28 are reported with academic performance critierion measures such as errors in course examinations and final course grades.

The Test Anxiety Inventory (TAI), a self-reported psychometric scale,was developed to measure individual differences in test anxiety as a situation-specific personality trait (Spielberger, 1972; Spielberger et al., 1978). The TAI Test Form is one page and includes directions, twenty items, and space for recording responses. The respondents are asked to report how frequently they experience specific symptoms of anxiety before, during and after examinations. In addition to measuring individual differneces in anxiety proneness in test situations, the TAI subscales assess worry and emotionality as major components of test anxiety.

Although developed to measure test anxiety in high school and college students, the TAI has been used

successfully with junior high school students. It is similar in concept and structure to the A-Trait Scale of the State-Trait Anxiety Inventory (STAI) which measures general anxiety proneness in adolescents and adults (Spielberger, Gorsuch, and Lushene, 1970).

When the development of the TAI began in 1974, Sarason's (1972, 1978) Test Anxiety Scale (TAS) was the most widely used instrument for measuring test anxiety. The constuction of the TAI began with the administration of the 37-item TAS to 426 undergarduates. The point-biserial correlations of 22 TAS items and the total scores on the scale were .40 or higher. These items were retained for further study, along with 4 other TAS items with content validity as measures of worry.

The next step in the construction of the TAI was to revise and simplify the 26 retained TAS items and to add .6 new items with content validity as measures of worry or emotionality. Of the new items, 3 were adapted from the STAI A-State scale, 1 was adapted from a scale developed by Osterhouse (1969), and 2 were written by the test author.

Of the retained TAS items, 13 were revised to be more general and to eliminate references to intelligence tests. In the final step of contrructing the Preliminary Form, the items were converted from the true-false format of the TAS to the rating-scale formate used with the STAI A-Trait scale. Subjects are instructed to describe their

general feelings by reporting how frequently they experienced particular symptoms of test anxiety. The 32-item Preliminary Form was administered to a new sample of 300 undergraduates. For each item, item-remainder correlations were computed for men, for women and for the total sample. Consequently, 10 preliminary items were discarded.

A factor analysis of the remain 22 preliminary items, using the prinicipal factors method with varimax rotations, yielded well-defined worry and emotionality factors. Two items were eliminated. The final set of 20 TAI items was factor analyzed again, and even stronger worry and emotionality factors were identified.

Further work was directed to determine if more subscale items would improve internal consistency reliability. In the factor analysis of data for a normative sample of 1,449 undergraduates, 6 items had higher loadings on one factor than on the other factor. These items were added, individually and in various combinations, to the preliminary 5-item TAI/W and the TAI/E subsclaes, and alpha coefficients were computed for various combinations of six to eight item subscales.

The self-report questionnaire is by far the most popular instrument for the experimental measurement of anxiety. A questionnaire is made up of statements or words that describe the respondent's feelings or attitudes about himself or his environment. Questionnaires are subject to

certain response biases, primarily those which result from the tendency of most people to present themselves in a desirable light. However, these shortcomings appear of less moment than the ease of administration and scoring of the questionnaire. There are questionnaires that deal with anxiety-proneness or predisposition as a general characteristic of the respondent. The test anxiety questionnaires in the review of literature are an attempt to measure an important, specific, emotional response to the testing situation rather than the general trait of anxiety.

Correlations among scores on anxiety inventories average about .35 (Levitt, 1977). General anxiety inventories are usually found to be unrelated to measures of intelligence or of intellectual performance, while test anxiety measures show moderate negative correlations with measures of academic achievement and intelligence. The use of short-forms or variations in scoring systems appears to have little or no effect on experimental results.

In summary, test anxiety is usually defined as a set of responses to a class of stimuli that have been associated in the individual's experience of evaluation or testing. The character and components of this process have been described by many (Mandler and Watson, 1966; Sarason, 1966; Spence and Spence, 1966; Wine, 1971; and Wolpe, 1966)

Test anxiety is a special case of general anxiety. It refers to those phenomenological, physiological, and

behavior responses that accompany concern about possible failure (Sarason, 1980:17).

The phenomenology of anxiety refers to the content of the individual's consciousness at each stage of the anxiety process. Phenomenological measures typically have taken the form of self-report questionnaires, the most notable of which are the Worry-Anxiety Scale (Liebert and Morris, 1967); the State-Trait Anxiety Scale (Spielberger Gorsuch, and Luschene, 1970); the Facilitating-Debilitating Anxiety Scale (Sarason, Hill and Zimbardo, 1964); Test Anxiety Scale (Sarason, 1972); and the Test Anxiety Inventory (Spielberger, 1980). Self-report scales have proved to be the most valid predictors of other anxiety phenomena (Sarason, 1980:24).

Development of a Questionnaire

In general the questionnaire refers to " a device for securing answers to questions by using a form that the respondent fills in himself" (Goode, William, and Hatt, Paul, 1962:133). The use of questionnaires in research is based on one basic, underlying assumption: the respondent will give truthful answers. This means the respondent will be both willing and able to give truthful answers (Payne, 1951).

Alreck and Settle (1985) discussed the survey planning and design of a questionnaire. They outlined the following steps that should be taken into consideration when

developing a survey instrument:

1. Sponsorship and Topics
2. Project Planning
3. Sampling Design
4. Question Composition
5. Scaling Techniques
6. Questionnaire Construction
7. Mail Data Collection
8. Interview Data collection
9. Data Processing
10. Statistical Analysis
11. Interpreting Results
12. Report Generation

Simon and Burstein (1985) also emphasized important procedures to follow when constructing a questionnaire. The key elements in sound questionnaire construction are:

1. Keep the study puppose clearly in mind at all times.
2. Decide on a topic or topics.
3. Number the topics in a logical order, using these principles:
    a. The organization of the questionnaire should seem sensible and smooth-flowing.
    b. If some questions will affect the answers to others, put the influencing questions afterwards.
    c. If there are some questions that may antagonize people, put them last.
    d. Put the least important questions near the end, in case they do not get answered.

Sudman and Bradburn (1982) described the steps in preparing a questionnaire. They noted that follow-through is critical in preparing a good questionnaire and suggested the following steps:

1. Decide what information is needed.
2. Conduct a search in data archives for existing questions and scales on the topics of interest.
3. Draft new questions and/or revise existing questions.
4. Put the questions in sequence.
5. Format the questionnaire.
6. Precolumn and precode.
7. Get peer evaluation of draft questionnaire in group sessions and/or individually.
8. Revise draft and test the revised questionnaire on yourself, friends, relative, or co-workers.
9. Prepare simple interviewer instructions for pilot test: revise questionnaire if the instruction writing or interviewer training uncover any problems.
10. Pilot-test on small sample of respondents (twenty to fifty) similar to the universe from which you are sampling.
11. Obtain comments of interviewers and respondents in writing and/or at interviewer debriefings.
12. Eliminate questions that do not descriminate between respondents or that do not appear to provide the kind of information required.
13. Revise questions that cause difficulty.
14. Pilot-test again.
15. Prepare final interviewer instructions: revise questionnaire if the instruction writing uncovers any problems.

16. During interviewer training and initial interviewing, be alert for possible new problems; interviewing may need to be stopped until new instructions can be issued to interviewers.

17. After interviewing is completed, analyze interviewer report forms and debrief interviewers and coders to determine whether there were any problems that woudl affect analysis.

18. Use the experience gained on one questionnaire for future planning.

Fowler (1985) discussed the advantages and disadvantages in self-administered questionnaires. Potential advantages of self-administered data collections:

1. Ease of presenting questions.

2. Asking batteries of similar questions.

3. The fact that the respondent does not have to share answers with an interviewer.

Potential disadvantages of self-administration:

1. Especially careful questionnaire design is needed.

2. Open questions usually are not useful.

3. Good reading and writing skills by respondents are needed.

4. The interviewer is not present to exercise quality control with respect to answering all questions, meeting question objectives, or the the qaulity of answers provided.

Measurement is an important aspect in research methods. The following list of terms along with an operational definition is needed in the development of a valid and reliable qeustionnaire. The terms are as follows:

1. Scale - is a set of categories to differentiate among people on any one variable. There may be as few as two categories in a scale or as many as 100 or more (Kidder, 1981:136).

2. Ordinal Scale - contains categories that can be ordered by rank on a continuum. The categories have a rudimentary arithmetic meaning such as "more" or less" of the quantity being measured (Kidder, 1981:137).

3. Reliability - is usually concerned with stability over time. A reliable questionnaire item is an item that consistently conveys the same thing (Goode, William and Hatt, Paul,(1962).

4. Test-Retest Correlation - by using an instrument twice on the same persons or groups, we can compute the correlation between their two scores. This correlation is a measure of the reliability of the instrument (Kidder, 1981:126).

5. Validity - of a questionnaire item is concerned with whether or not the item actually elicits the intended information. Questionnaire items are valid if they are successful in eliciting true responses relevant to the information desired (Goode, William and Hatt, Paul, (1962).

6. Face Validity - is evaluated by a group of judges, sometimes experts, who read or look at a measuring technique and decide whether in their opinion it measures what its name suggests.

It was evident from the literature review that the development of a questionnaire is more of a science than an art. Berdie and Anderson (1974) noted "each study using a questionnaire is unique and must be tailored to fit the individual circumstances on that study." A practicum designed to develop a questionnaire in order to identify test anxiety in nursing students was deemed appropriate.

Definition of Terms

In initiating the study, some basic terms were identified to help understand the intent and purpose of the study and assist in interpreting the results. The selected terms are listed below:

1. Test Anxiety: A set of responses to a class of stimuli that have been associated in the individual's experience of evaluation or testing (Mandler and Watson, 1966).
2. Nursing Student: A student enrolled in an Associate Degree Registered Nurisng Program.
3. Test Anxiety Questionnaire for Nursing Students: A 40-item self-report questionnaire for Associate Degree nursing students that assesses the signs and symptoms of test anxiety.

Limitations of the Study

The study has limitations that were identified. these limitations may place restrictions upon the reliability, validity, applicability, or general usefulness of the study. In considering the intent and scope of this study, the following limitaions were identified:

1. The study was limited to second year Associate Degree nursing students. First year nursing were not included.

2. The second year nursing student who participated in the study were all women.
3. The Test Anxiety Questionnaire for Nursing Students was not statistically correlated with other existing test anxiety questionnaires.

Basic Assumptions

In initiating the study, some basic assumptions were made in relation to the developemnt of the questionnaire. It was assumed that:

1. Nursing students will answer truthfully on the self-reported test anxiety questionnaire.
2. The Test Anxiety Questionnaire for Nursing Students is a reliable and valid instrument for the measurement of test anxiety.
3. The expert panel is knowledgeable of the signs and symptoms of test anxiety, and have a basic understanding in the development of a questionnaire.

PROCEDURE

The descriptive method of research was used. The following sources were utilized for a review of literature:

1. The libraries at California State University Northridge, and Los Angeles, and University of California at Los Angeles.
2. The descriptors were: anxiety; test anxiety; test anxiety questionnaires; survey instruments; questionnaires.
3. The Indexes utilized were; Educational and Psychological Indexes; Allied Health Index; and Biological Index.
4. The data bases utilized were: Information Retrieval Service - Educational Resources Information Center (ERIC); and University Microfilms International.

For the purpose of this study, the physiological signs and symptoms of anxiety were defined as:

> a feeling of uneasiness, apprehension or dreed, that may include feelings of general irritability, hyperexcitation or depression, palpitations, dryness of the throat and mouth, impulsive bevarios, urge to cry or run and hide; inability to concentrate; fatigue; accident proneness; feelings of unreality; weakness or dizziness; emotional tension and alertness; trembling; nervous tics; high pitched nervous laughter; speech difficulties; bruxism; insomnia; hyperinsomnia; hypermotility; diaphoresis; polyuria; diarrhea; indigestion; nausea; vomiting; arthralgia; migraine headaches;

> loss of or excessive appetite; increased smoking; increased use of various medicines; nightmares; inability to read or concentrate; tendency to be easily startled by small sounds; and neurotic behavior (Miller, 1982).

The Test Anxiety Questionnaire (TAQ) developed by Mandler and Sarason (1952) and the Test Anxiety Inventory (TAI) developed by Spielberger (1980) were reviewed for content, style, format, and statistical analysis. The physiological signs and symptoms of anxiety as defined by Miller (1982) were placed in a statement format. A Likert 4-point scale was constructed for the respondents to reply to the statements. Respondents use a 4-point scale to report how frequently they experience specific signs and symptoms of anxiety in test situations. The four choices are: 1) Almost Never, 2) Sometimes, 3) Often, and 4) Almost Always.

The scoring weights for items 2 through 36 are 1 through 4, as printed to the right of each item on the test form (Appendix A). "Almost Never," which indicates low test anxiety, is scored "1"; "Almost Always" shows high test anxiety and is scored "4." However, for item 1, 37, 38, 39, and 40, the scoring weights are reversed. For example, item "1", "I feel confident and relaxed," "Almost Never" indicates high anxiety and "Almost Always" indicates low anxiety.

In addition each statement had a 3-point scale constructed to the left of the statement for the expert panel to rate each statement. The statement could receive from one to three points as to its perceived importance by the

panel in relation to the statement's relative importance in defining one of the signs and/or symptoms and test anxiety. The three choices were: 1) Not Important, 2) Moderately Important, and 3) Very Important. The scoring weights were: "1" for "Not Important," "2" for "Moderately Important," and "3" for "Very Important," (Appendix B).

The professional nursing educators employed full-time during the spring semester of 1986 at Los Angeles Valley College, Department of nursing were aksed to volunteer to form the two expert panels. A meeting was held with the first expert panel. These three panel members were each given the questionnaire with instructions for rating each statement. There was a through discussion of the statements by the expert panel. At the end of the meeting each panel member completed the rating of the statements on the questionnaire. Another meeting was held with the second expert panel, consisting of three members. At this meeting the panel was presented with the revised questionnaire. There was a through discussion of the first panel's findings. The questionnaire was again reviewed and revised until all panel members agreed that the instrument possessed face validity.

The second year nursing students enrolled at Los Angeles Valley College, Department of nursing were asked to volunteer in a research project. The instructions included that the students would be asked to complete two

questionnaires, a week apart, and would take approximately 20 minutes to complete each questionnaire (Appendix C).

During the month of May, 1986, 50 second year nursing students were given a consent form and instructions for the completion of the "Student Nurses' Opinions of Test Attitude" questionnaire (Appendix D). The students were given the questionnaire one hour prior to a nursing test. One week later, and again, one hour prior to another nursing test they were given the questionnaire again (Appendix C).

RESULTS

A total of six full-time professional nursing educators volunteered to comprise two expert panels. The first panel was given the questionnaire (Appendix A) at a scheduled meeting. They rated the statements according to the instructions. The results were analyzed in terms of the score, individual Likert scale score [1 (Not Important) 2 (Moderately Important) and 3 (Very Important)]. Only those statement rated at least two and above by each member of the panel were kept for inclusion in the questionnaire. The entire panel rated all 40 statement with a score of "2" or "3", none were rated "1". All original statements were kept in the questionnaire.

The second expert panel also consisted of three professional nursing educators. A scheduled meeting was held and after a through discussion of the findings of the first panel, the second panel was instructed to read each statement and circle those statement that did not possess face validity. At the end of the meeting the panel felt that all the statements possessed face validity.

The questionnaire then was prepared in its final form (Appendix C). During the month of May, 1986 the second year nursing students were asked to participate in a research project. They were given a consent form and instructed that they could volunteer to be part of a

research project regarding the student nurses' opinions on test attitudes. In addition, they were told that it would take approximately 20 minutes to complete each of the two questionnaires and that they would be given one week apart, as this was part of the research project to take the questionnaire twice.

Of the 110 second year student nurses, 50 volunteered for the study. The first Monday during the second week of May, 1986, one hour prior to a nursing test, 50 nursing students completed the questionnaire. Seven days later, and again, one hour prior to another nursing test the questionnaire was administered again to the same 50 student nurses. Upon viewing the completed questionnaire all were found to be suitable to be included for analysis.

The following statistical formula was chosen for the statistical analysis of the data:

Computing formula for the Pearson Correlation Coefficient (Glass and Stanley, 1970:113).

$$r_{XY} = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}},$$

Where N = number of data pairs.

The raw score for each of the 50 nursing students is indicated in Table 1. With "X" being the score from the first questionnaire, and "Y" the score from the second questionnaire.

Table 1

Total Raw Score for Fach Student

STUDENT	X	Y	STUDENT	X	Y
1.	69	68	26.	67	72
2.	42	43	27.	94	73
3.	63	64	28.	64	65
4.	98	93	29.	77	70
5.	42	48	30.	73	74
6.	70	73	31.	50	47
7.	76	81	32.	77	78
8.	76	70	33.	76	79
9.	68	69	34.	52	53
10.	112	92	35.	71	73
11.	92	77	36.	77	76
12.	62	64	37.	57	60
13.	68	71	38.	64	63
14.	76	76	39.	77	78
15.	111	110	40.	92	94
16.	36	26	41.	52	51
17.	87	100	42.	48	43
18.	70	66	42.	104	110
19.	78	81	44.	66	69
20.	74	76	45.	91	94
21.	47	48	46.	92	89
22.	57	56	47.	83	81
23.	87	80	48.	64	63
24.	86	85	49.	75	76
25.	60	51	50.	78	79
Totals	1807	1768		1821	1810

Table 2

Statistical Analysis of the Data

ΣX	=	3628	$(\Sigma X)^2$	=	13162384
ΣY	=	3578	$(\Sigma Y)^2$	=	12802084
ΣXY	=	273048			
ΣX^2	=	277774			
ΣY^2	=	270180			

$$r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{[N\Sigma X^2) - (\Sigma X)^2]\ [N\Sigma Y^2 - (\Sigma Y)^2]}}$$

$$r = \frac{50(273048) - (3628)(3578)}{\sqrt{[50(277774)-(13162384)]\ [50(270180)-(12802984)}}$$

$$r = \frac{671416}{716550}$$

$$r = .937$$

Table 2 indicates there is a strong positive correlation between the values of X and Y. However, it can not be concluded that X and Y are correlated strongly in the general population of all Associate Degree nursing students.

Table 3

Presentation of Grouped Data

Range of Scores	Number of Student	Percentage
40 - 65	15	30%
66 - 90	25	50%
91 - 115	10	20%
116- 140	0	0
Totals	50	100%

The possible range of scores for the questionnaire were from 40 to 160 points. A bell-shaped curve of the scores resulted with the following categories:

Level of Anxiety	Score
Low Anxiety	40 - 65
Moderately Low Anxiety	66 - 90
Moderately High Anxiety	91 - 115
High Anxiety	116 - 140

In the "Low Anxiety" range there were 15 students, or 30% of the total students. In the "Moderately Low Anxiety" range there were 25 students or 50% of the total students. In the "Moderately High Anxiety" range there were 10 students, or 20% of the total students. In the "High Anxiety" range there were no students in this category.

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

The results of the study indicated that the expert panel members perceived that the development of a questionnairs in order to identify test anxiety in nursing students as being a needed instrument in the program in assessing for and identifying test anxiety.

The literature review does indeed support the need to assess for test anxiety in students. It has been shown in numerous studies that those students who are assessed has having high levels of test anxiety do indeed perform more poorly than those who do not (Holroyd, Westbrook, Wolf, and Badhorn, 1978).

The results of the two expert panels findings indicated that the questionnaire did possess face validity. Upon review of the statistical analysis of the data, there was a very strong positive correlation of .937 results of the test-retest procedure of the questionnaire.

The students who participated in the study also commented favorably to the faculty and that they appreciated their concerns they have for the nursing students. The graduate nursing students from Los Angeles Valley College have requested numerous times for the Nursing Program to offer a course on Test-Taking Strategies. Since the majority of the graduate nursing students at Los Angeles

Valley College do attend State Board Review classes and purchase review books, they are introduced to these test-taking strategies that include reduction of test anxiety and this is usually the first exposure to these techniques. Many of these students noted that they felt they would have performed better not only during their nursing tests while in the program, but they would have also performed better when taking the NCLEX-RN (National Council Licensure Examination for Registered Nurses), had they been given these test-taking strategies at the beginning of their nursing studies.

Another interesting finding in this study was the scores on the questionnaire (Table 1and 3). The possible range of scores were between 40 and 140. A total of 30% of the students were in the "Low Anxiety" range, a total of 50% were in the "Moderately Low Anxiety range and a total of 20% of the student were in the "Moderately High Anxiety" range of scores.

The implications of this study can be far reaching for the students, faculty, and the administration. The implications for the nursing faculty at Los Angeles Valley College to accept their role in not only assessing for test anxiety in the students, but also view test-taking as a skill, can have a tremendous impact on the program considering the negative consequences when students have high levels of test anxiety.

Furthermore, by identifying those students with levels of test anxiety that interfere with their test grades early in the program, these students can be referred to appropriate support services.

The literature supports the need to offer various modalities for the treatment of test anxiety (Chang, 1985). in order to allow the student to perfrom at their very best during a testing situation.

Two Registered Nursing Programs in the Los Angeles Community College District have been discontinued this year due to the low scores on the NCLEX-RN. The district uses the percentage of students that pass the NCLEX-RN as the main criteria in determing the relative success of a nursing program in the district.

The faculty should view test-taking strategies as a skill that is needed by the nursing students not only to perform at their best while in the program, but also when taking the NCLEX-RN. The program misses a critical opportunity and fails in its responsibility each time it loses a student nurses due to failing grades that are related to high levels of test anxiety. Since it is important to the survival of the program to have a low attrition rate while the students are in the program, the expectation of a high percentage of the students to pass the NCLEX-RN, and accountability for vocational education programs becomes even more important as we are faced with decreased

funds and number of faculty, a questionnaire in order to identify high levels of test anxiety early in their course of studies and enable the faculty to direct those students to the necessary support services in order to assist them to perform at their best and thus perhaps lowering the attrition rate in the program and perhaps a higher number of students passing the NCLEX-RN.

Based on the results and interpretation of this study, the following recommendations are suggested.

1. The expert panel should share with the entire nursing faculty the results of this study.
2. The Nursing Program should share with the Dean of Vocational Education and the District Office the results of this study.
3. The Nursing Program needs to continue to review and revise the questionnaire by:
   A. Asking the entire nursing faculty to rate the questionnaire as to each statements relative importance.
   B. Asking the entire nursing student body to critique each statement as to clarity and understanding.
   C. Asking the entire nurisng student body to add their own subjective signs and symptoms of test anxiety.

D. Administer the questionnaire to the first and second year nursing students.

E. Increase the interval between the test-retest procedure from one week to one month.

4. More communication and literature should be shared with the nursing faculty on identification and treatment modalities on test anxiety.
5. Consult with the other Nursing Programs in the district to exchange information on the subject of test anxiety and test-taking strategies.
6. Offer a seminar on a volunteer basis to all the nursing students in the program and monitor performance levels by observing the test scores and test anxiety levels both before and after the seminar.

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APPENDIX A

APPENDIX A

QUESTIONNAIRE SCORING

IDENTIFICATION NUMBER_____Date_____SEX:___F___M

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then check the space to the right of the statement to indicate how you "generally" feel prior to, and/or during a paper and pencil nursing test. There are no right or wrong answers. Do not spend to much time on any one statement. Thank you.

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
1. I feel confident and relaxed.	4	3	2	1
2. I feel uneasy or apprehensive	1	2	3	4
3. I feel hyperexcited or depressed	1	2	3	4
4. I am unable to concentrate.	1	2	3	4
5. I experience dryness of the throat or mouth	1	2	3	4
6. I experience weakness or dizziness.	1	2	3	4
7. I have feelings of unreality.	1	2	3	4
8. I feel emotionally tense.	1	2	3	4
9. I experience trembling or nervous tics.	1	2	3	4
10. I have a high-pitched nervous laugh	1	2	3	4
11. I have speech difficulities	1	2	3	4
12. I experience insomnia or hyperinsomnia	1	2	3	4
13. I experience indigestion, nausea and/or vomiting.	1	2	3	4
14. I experience diaphoresis.	1	2	3	4
15. I have a loss of or excessive appetite.	1	2	3	4
16. I experience hyperactility or diarrhea.	1	2	3	4
17. I experience increased smoking and/or drinking.	1	2	3	4
18. I am unable to read	1	2	3	4
19. I have a tendency to be easily startled by small sounds.	1	2	3	4
20. I experience nightmares	1	2	3	4

Continued on Page 2

QUESTIONNAIRE SCORING

IDENTIFICATION NUMBER_____Date_____Sex:___F___M

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then check the space to the right of the statement ot indicate how you "generally" feel prior to, and/or during a paper and pencil nursing test. There are no right or wrong answers. Do not spend to much time on any one statement. Thank you.

		ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
21.	I have an increased use of various medicines. .	1	2	3	4
22.	I experience polyuria	1	2	3	4
23.	I feel fatigued	1	2	3	4
24.	I feel the urge to cry or run and hide	1	2	3	4
25.	I experience palpitations	1	2	3	4
26.	I experience bruxism (teeth grindings).	1	2	3	4
27.	I am more accident prone	1	2	3	4
28.	I have feelings of general irritability	1	2	3	4
29.	I experience arthralgia	1	2	3	4
30.	I experience migraine headaches	1	2	3	4
31.	I have feelings of dread	1	2	3	4
32.	I experience neurotic behavior.	1	2	3	4
33.	I feel nervous.	1	2	3	4
34.	I wish tests did not bother me so much.	1	2	3	4
35.	I freeze up	1	2	3	4
36.	I worry a great deal.	1	2	3	4
37.	I feel calm, cool, and collected.	4	3	2	1
38.	I feel secure	4	3	2	1
39.	I feel at ease.	4	3	2	1
40.	I feel pleasant	4	3	2	1

End

APPENDIX B

APPENDIX B

EXPERT PANEL RATING FORM FOR THE QUESTIONNAIRE

IDENTIFICATION NUMBER_____Date_____SEX:___F___M

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then check the space to the right of the statement to indicate how you "generally" feel prior to, and/or during a paper and pencil nursing test. There are no right or wrong answers. Do not spend to much time on any one statement. Thank you.

NOT IMPORTANT	MODERATELY IMPORTANT	VERY IMPORTANT		ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
___	___	___	1. I feel confident and relaxed.	___	___	___	___
___	___	___	2. I feel uneasy or apprehensive	___	___	___	___
___	___	___	3. I feel hyperexcited or depressed	___	___	___	___
___	___	___	4. I am unable to concentrate.	___	___	___	___
___	___	___	5. I experience dryness of the throat or mouth . . .	___	___	___	___
___	___	___	6. I experience weakness or dizziness.	___	___	___	___
___	___	___	7. I have feelings of unreality.	___	___	___	___
___	___	___	8. I feel emotionally tense.	___	___	___	___
___	___	___	9. I experience trembling or nervous tics.	___	___	___	___
___	___	___	10. I have a high-pitched nervous laugh	___	___	___	___
___	___	___	11. I have speech difficulities	___	___	___	___
___	___	___	12. I experience insomnia or hyperinsomnia	___	___	___	___
___	___	___	13. I experience indigestion, nausea and/or vomiting.	___	___	___	___
___	___	___	14. I experience diaphoresis.	___	___	___	___
___	___	___	15. I have a loss of or excessive appetite.	___	___	___	___
___	___	___	16. I experience hypermotility or diarrhea.	___	___	___	___
___	___	___	17. I experience increased smoking and/or drinking. .	___	___	___	___
___	___	___	18. I am unable to read	___	___	___	___
___	___	___	19. I have a tendency to be easily startled by small sounds.	___	___	___	___
___	___	___	20. I experience nightmares	___	___	___	___

Continued on Page 2

APPENDIX B

EXPERT PANEL RATING FORM FOR THE QUESTIONNAIRE

IDENTIFICATION NUMBER_____Date_____Sex:___F___M

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then check the space to the right of the statement ot indicate how you "generally" feel prior to, and/or during a paper and pencil nursing test. There are no right or wrong answers. Do not spend to much time on any one statement. Thank you.

NOT IMPORTANT	MODERATELY IMPORTANT	VERY IMPORTANT		ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
___	___	___	21. I have an increased use of various medicines. .	___	___	___	___
___	___	___	22. I experience polyuria	___	___	___	___
___	___	___	23. I feel fatigued	___	___	___	___
___	___	___	24. I feel the urge to cry or run and hide	___	___	___	___
___	___	___	25. I experience palpitations	___	___	___	___
___	___	___	26. I experience bruxism (teeth grindings).	___	___	___	___
___	___	___	27. I am more accident prone	___	___	___	___
___	___	___	28. I have feelings of general irritability	___	___	___	___
___	___	___	29. I experience arthralgia	___	___	___	___
___	___	___	30. I experience migraine headaches	___	___	___	___
___	___	___	31. I have feelings of dread	___	___	___	___
___	___	___	32. I experience neurotic behavior.	___	___	___	___
___	___	___	33. I feel nervous.	___	___	___	___
___	___	___	34. I wish tests did not bother me so much.	___	___	___	___
___	___	___	35. I freeze up	___	___	___	___
___	___	___	36. I worry a great deal.	___	___	___	___
___	___	___	37. I feel calm. cool. and collected.	___	___	___	___
___	___	___	38. I feel secure	___	___	___	___
___	___	___	39. I feel at ease.	___	___	___	___
___	___	___	40. I feel pleasant	___	___	___	___

End

THANK YOU FOR YOUR PARTICIPATION.

APPENDIX C

Appendix C

STUDENT NURSES' OPINIONS ON TEST ATTITUDES

IDENTIFICATION NUMBER_____Date_____SEX:____F____M

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then check the space to the right of the statement to indicate how you "generally" feel prior to, and/or during a paper and pencil nursing test. There are no right or wrong answers. Do not spend to much time on any one statement. Thank you.

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
1. I feel confident and relaxed.	___	___	___	___
2. I feel uneasy or apprehensive	___	___	___	___
3. I feel hyperexcited or depressed	___	___	___	___
4. I am unable to concentrate.	___	___	___	___
5. I experience dryness of the throat or mouth . . .	___	___	___	___
6. I experience weakness or dizziness.	___	___	___	___
7. I have feelings of unreality.	___	___	___	___
8. I feel emotionally tense.	___	___	___	___
9. I experience trembling or nervous tics.	___	___	___	___
10. I have a high-pitched nervous laugh	___	___	___	___
11. I have speech difficulities	___	___	___	___
12. I experience insomnia or hyperinsomnia	___	___	___	___
13. I experience indigestion, nausea and/or vomiting.	___	___	___	___
14. I experience diaphoresis.	___	___	___	___
15. I have a loss of or excessive appetite.	___	___	___	___
16. I experience hypermotility or diarrhea.	___	___	___	___
17. I experience increased smoking and/or drinking. .	___	___	___	___
18. I am unable to read	___	___	___	___
19. I have a tendency to be easily startled by small sounds.	___	___	___	___
20. I experience nightmares	___	___	___	___

Continued on Page 2

STUDENTS NURSES'OPINIONS ON TEST ATTITUDES

IDENTIFICATION NUMBER_____Date_____Sex:___F___M

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then check the space to the right of the statement ot indicate how you "generally" feel prior to, and/or during a paper and pencil nursing test. There are no right or wrong answers. Do not spend to much time on any one statement. Thank you.

		ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
21.	I have an increased use of various medicines. .	___	___	___	___
22.	I experience polyuria	___	___	___	___
23.	I feel fatigued	___	___	___	___
24.	I feel the urge to cry or run and hide	___	___	___	___
25.	I experience palpitations	___	___	___	___
26.	I experience bruxism (teeth grindings).	___	___	___	___
27.	I am more accident prone	___	___	___	___
28.	I have feelings of general irritability	___	___	___	___
29.	I experience arthralgia	___	___	___	___
30.	I experience migraine headaches	___	___	___	___
31.	I have feelings of dread	___	___	___	___
32.	I experience neurotic behavior.	___	___	___	___
33.	I feel nervous.	___	___	___	___
34.	I wish tests did not bother me so much.	___	___	___	___
35.	I freeze up	___	___	___	___
36.	I worry a great deal.	___	___	___	___
37.	I feel calm. cool. and collected.	___	___	___	___
38.	I feel secure	___	___	___	___
39.	I feel at ease.	___	___	___	___
40.	I feel pleasant	___	___	___	___

End

THANK YOU FOR YOUR PARTICIPATION.

APPENDIX D

APPENDIX D

CONSENT FORM

AN EXPLORATORY STUDY ON STUDENT NURSES' OPINIONS ON TEST ATTITUDES

Cassandra Todd Carraway, R.N., M.S.N., Principal Investigator

In agreeing to participate in this study, I understand the following:

1. The purpose of the investigation is to study the opinions of student nurses regarding test attitudes.

2. The time required for my participation in the project will be approximately twenty minutes to complete two questionnaire sets. To be taken one week apart.

3. The study findings are expected to contribute both to research and to professional nursing practice. There is no risk to me.

4. All information I give in completing the questionnaires will be kept confidential, and coded to by anonymous prior to data analysis. Neither my name or my initials will ever be used in any discussion or reporting of the data, and the study results will be published only in group form.

5. Any questions I may have about the project procedures and other matters will be answered to my satisfaction, and I am free to withdraw from the project without any disadvantage to me as a student nurse enrolled at:

   Los Angeles Valley College - Health Science Department

6. The moral and ethical aspects of this study have been reviewed by:

   Los Angeles Valley College - Health Science Department
   Department of Nursing, and all ethical, moral and humanistic aspects of the project have been approved.

7. I herewith give my consent to be a participant in this project with the understanding that such consent does not waive any of my legal rights. I have received a copy of this signed and dated consent form for my files.

Date	Name (student)
March 12 1986	Cassandra Carraway
Date	Principal Investigator

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